

## Implementation of Brain-Based Learning in Teaching Reading

**The Implementation of *Brain-Based Learning* in Teaching Reading Descriptive Text to the Tenth Graders of SMA Khadijah Surabaya****Muna Fitria**Pendidikan Bahasa Inggris, Fakultas Bahasa dan Seni, Universitas Negeri Surabaya  
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**Abstrak**

Membaca adalah salah satu kemampuan berbahasa Inggris yang mempunyai tanggungjawab besar, karena pengalaman membaca para siswa akan berdampak pada pengayaan diri, kelangsungan ekonomi, dan kemungkinan berkarir, hubungan sosial, kegiatan di waktu luang, dan identitas budaya. Membaca juga memberi kontribusi khusus pada perkembangan berbahasa. Adalah otak, yang menghasilkan kemampuan yang dibutuhkan untuk memenuhi fungsi membaca seperti tersebut di atas. Otak adalah aspek utama dalam mengolah informasi saat manusia belajar, baik dalam konteks informal atau formal. Sayangnya, banyak kegiatan belajar mengajar di kelas yang tidak harmonis dengan cara kerja otak. Maka dari itu, sebuah model mengajar terbaru yang menyelaraskan cara guru mengajar dengan cara siswa belajar sangat diperlukan, dan *Brain-Based Learning* (BBL) adalah jawabannya. Pertanyaan-pertanyaan yang diajukan sebagai dasar penelitian adalah: (1) bagaimana penerapan BBL dalam mengajar membaca pada siswa kelas 10 di SMA Khadijah Surabaya?, (2) bagaimana kemampuan membaca mereka setelah penerapan tersebut?, dan (3) bagaimana tanggapan mereka terhadap penerapan tersebut? Hasil penelitian menunjukkan bahwa penerapan BBL berjalan memuaskan, meskipun bukan tanpa cela. Pengajaran mengikuti Model Mengajar Brain-Based Jensen dengan melewati tahap *pre-*, *whilst-*, dan *post-reading*. Ditambah lagi, proses belajar-mengajar diamati telah memasukkan mayoritas dari faktor-faktor Brain-Based yang dikemukakan Erlauer. Siswa menanggapi penerapan BBL dengan baik, merasa bahwa BBL membantu mereka dalam mengatasi sebagian masalah yang mereka hadapi dalam memahami teks deskripsi.

**Kata Kunci:** teaching, reading, descriptive text, SMA, Brain-Based.**Abstract**

Reading is one of the English skills which carries splendid responsibility; for students' experience in reading will impact on "personal enrichment; economic viability and employment prospects; social relationships; leisure activities and cultural identity". Reading also gives special contribution to language development. Responsible for all the abilities required in performing the function of reading is brain. It is the main aspect in processing information when people learn – either in informal or formal context. Unfortunately, many activities in most classes are not "brain-compatible". Therefore, a recent teaching model which harmonizes how teachers teach with how pupils' brains work is needed and Brain-Based Learning is the answer. Three questions were stated as bases for this study; (1) how is the implementation of BBL in teaching reading descriptive text to the tenth graders of SMA Khadijah Surabaya?, (2) how is their reading ability after the implementation?, and (3) how are their responses towards the implementation? The result showed that the implementation of BBL followed Jensen's Teaching Model and had gone through pre-, whilst, and post-reading stages. In addition, the teaching-learning process was observed had brought in Erlauer's Brain-Based Key Factors. Students' responses toward the implementation were good. Most of them considered BBL sufficiently assisting them in comprehending descriptive text. Although not all of their complications in comprehending text were unraveled, some of them were.

**Keywords:** teaching, reading, descriptive text, SMA, Brain-Based.**INTRODUCTION**

Reading is one of the English skills that carries splendid responsibility; for it shapes pupils' characteristics in personal and social life. It can be used to lead pupils to be critical about the world and their

environment's culture. Pupils' experience in reading will also impact on "personal enrichment; economic viability and employment prospects; social relationships; leisure activities and cultural identity". In other words, it is a potential core to create "concepts of citizenship, civilization, and national identity". Reading also gives

special contribution to language development. Reading requires ability to interpret, comprehend, and respond critically to what meanings authors try to convey through texts. Pupils can also discover certain patterns and ways used by authors to communicate those meanings (Davison, 2002: 98 – 99). This pattern activates pupils' schema or – as Cook (1998 in Harmer, 2001: 199) referred it – “pre-existent knowledge of the world”. This ability is crucial when pupils encounter certain text with certain pattern, including its genre, topic, the use of particular language features and words, discourse patterning, or contexts; they will be able to immediately recognize what they are reading (Harmer, 2001: 199 – 200). This is the reason of the emergence of text genres. Indonesia's Curriculum Based Competence (CBC) classifies text genres used in junior high school (*Sekolah Menengah Atas/SMA*) into descriptive, procedure, recount, narrative, and report. Whereas the ones which is used as materials in senior high school (*Sekolah Menengah Atas/SMA*) level are recount, narrative, procedure, descriptive, news item, reports, analytical exposition, spoof, and hortatory exposition.

The special functions that reading carries as described in the previous paragraph, however, will seemingly not work if pupils do not consider the text they are reading means something. This opinion concurs with Davison's (2002) which states that “an unsatisfactory text can be switched off, left unfinished or replaced by readily available alternatives” (pg. 102). Hence, pupils' choice of what they read holds not less important place than the text readability and appropriateness.

Responsible for all those abilities required in reading is human brain. It is the main aspect in processing information when people learn – either in informal or formal context of learning. Thus, a teaching model which optimizes the brain's work and is able to improve students' reading ability is needed. *Brain-Based Learning* (which later will be referred to as BBL) is a recent one which essence is to harmonize how teachers teach with how pupils' brains work. The research findings about how it actually reacts when performing a task is great insight news for educators. “The aim of the brain based instructions is to pass from memorizing through meaningful learning” (Caine and Caine, 1990 in Duman, 2007: 2). Erlauer (2003) highlights seven key factors of BBL as aspects that need to be given notice in designing teaching instructions. Not only for designing teaching instructions, those key factors reveal the significant effect of learning environment and pupils' physical and mental states towards the way human brain works. They are sequenced in points below:

# 1. Emotional Wellness and Safe Environment

Jensen (2005: 69) believes that emotions “have their own memory pathways”. It means that emotions have strong connections with memory. As a proof, when people are asked to recall any memory of their past, the one that comes in mind is always an event which involved strong emotional, either negative or positive feeling. That is why teachers have to reckon students' emotions in learning. *BBL* suggests the creation of safe environment in classrooms. To develop a safe environment, the following factors need to be maintained: sense of community, free of fear, and teacher's behaviors.

# 2. The Body and Movement

Teachers always demand their students' attention and expect them engaged in teaching-learning activity. Engaged means, conservatively, sit and quietly pay attention to what the teacher is explaining. Yet, paying attention is not easy to do; moreover in a still position. (See Jensen: 34-35 to explain how difficult the process of paying attention in the brain) “Just standing up can increase the blood flow in the human body, bringing more oxygen to the brain”, which means energizing the brain, reducing stress, and enhancing the growth and connections between the brain cells (Erlauer, 2003). Thus, *BBL* suggests infusing more movement into everyday lessons.

A number of factors that can delay attention considerably are vegetables, water, sleep, and oxygen (Herson, 2006:15). Those factors affect glucose levels that deal with proper fuel for thinking. Students with low glucose level are possible to be tired and inattentive. Thus, teachers are better to make sure their students get enough (1) oxygen by opening windows whenever possible and bring plants inside the class, (2) water by allowing them to drink only water in the class, because water is the brain's best fuel, right after oxygen.

# 3. Relevant Content and Student Choices

Brain research told us that emotional, specific, and novel content is more likely to get our attention. Additionally, it concluded that content is more likely to become meaningful if people can relate it to familiar information and learn it in context (Jensen, 2005:44-5). Students do not really understand the concept meaningfully and deeply before they can explain what they have learned (observed or experienced) and generalize it into a concept or contrast it to other ideas. Konecki (2003:9) recommended teachers to have students explain their observation or experience to the groups and represent it in a graphic form and written explanation.

#### 4. Timing

Human brain has a cycle known as ultradian rhythms, which is the high-and-low rhythm of brain and body. They last about 90 to 110 minutes, so there are about 12 to 16 cycles over a 24-hour period (Jensen, 2005:48-9). As Caine (2002:66) stated that “learning is influenced by natural development of the body and the brain”, these ultradian rhythms affect moods, energy levels, and brain’s cognitive abilities.

#### 5. Enrichment

According to Erlauer (2003: 97-99), classroom enrichment can be in the form of (1) challenging, problem-solving tasks that involve high-level thinking skills such as reasoning and critical thinking. Duman (2007) believes that enrichment is important for brain-based instruction. It encourages students to think in more complex ways, find appropriate strategies for themselves, and improves “their meta-cognitive skills”; (2) music, either in upbeat or downbeat. The choice of music depends on what functions the teachers expected from: as an arousal, as a carrier, or as primer. The guideline is that the more upbeat the music or rhythm, the more heartbeat increased, and vice versa; (3) physical environment, such as visual enrichment (attach posters, bulletin board, class contract, or decorate walls), bright lighting, pleasant fragrance, or others.

#### 6. Assessment and Feedback

One of brain-compatible forms of assessment is self-assessment, because it “can address learner uniqueness and diversity” (Christison, 2002: 6). Students should be given chances to assess and evaluate their learning. Another form is the one with questions required high-level thinking skill because “the better the quality of questions asked, the more the brain is challenged to think” (Redfield and Rousseau, 1981 in Christison: 6). Instead of posing yes/no questions, questions which involves reasoning and critical thinking should be raised more often. Jensen (2005: 51-52) suggests that the oscillation in brain activity will result in some students getting lower scores if were tested at the wrong time. Therefore BBL advises an assessment form that is able to record students’ high and low performances that is portfolios.

When there is an assessment, there should be a feedback too. Feedback in class can happen both naturally – as in oral feedback, and in “a planned, purposeful manner” – as in written notes on students’ assignments. Students can make a correction and go on with the certainty that what they have learned is correct. Feedback needs to be prompt because the brain can hardly redo the learning process when the

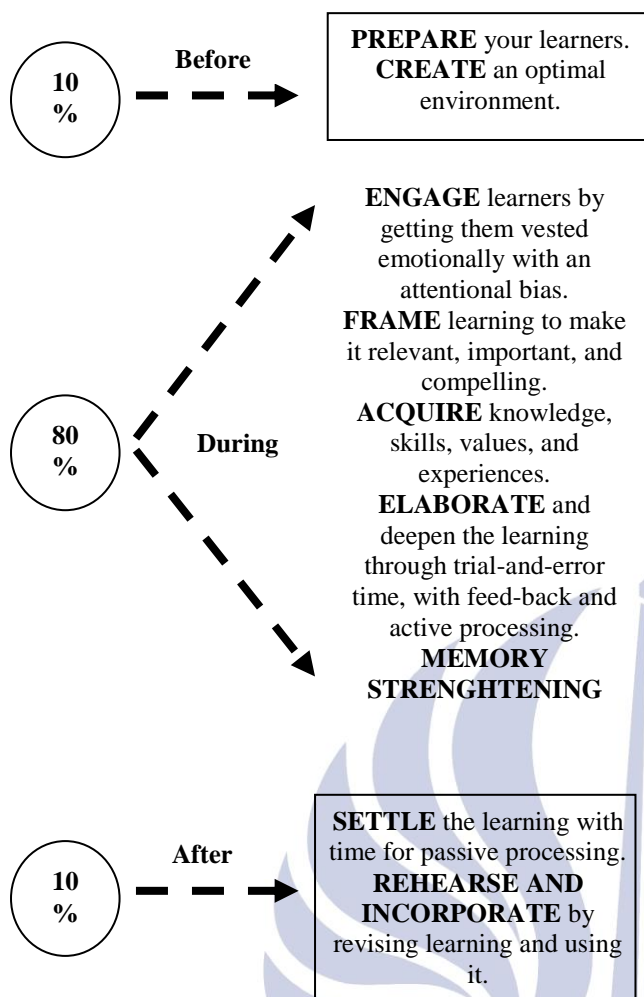
knowledge or skills have been embedded (Erlauer, 2003: 123 & 126). Moreover, it has to be specific. Positive reinforcements like “good job” or “nice work” are fine, but they do not give any clue of what to maintain and what to fix. Recommended by Marzano, Pickering, & Pollock (2001) in *Classroom Instruction That Works*, “The best form of feedback, with the highest effect on further achievement, is providing the student with a full explanation of accurate and inaccurate answers” (Erlauer, 2003: 129).

#### 7. Collaboration

The fact that “the human brain is a social brain” (Sousa, 1995 in Erlauer, 2003: 135) underlies the idea of collaborative learning. Through communication and collaboration, students can gain knowledge and at the same time solidify their knowledge by teaching it to others. Collaboration establishes teamwork towards the same goal and results in well function of the brain since “the brain tends to function well with the challenge of a goal” (pg. 136). Stronger emotional responses are produced when working in a problem-solving situation with others and that does well to brain. As explained earlier in point 1: Emotional Wellness and Safe Environment, information tends to be lasted in the brain when it is rich in emotion. The brain’s natural function to search for meaning is carried out as well when students work collaboratively to explore new information.

Collaborative learning can be done in either pair or group work. To form a pair work only takes two people. It may be done for working on a project, to have students tutor another, or simply to have them share information, discuss their opinion, or ask questions to each other. Johnson and Johnson’s Cooperative Learning model (1999, in Erlauer, 2003: 138) suggests group work is formed in small groups of four to six members. They should work in a teamwork, assistance, and encouragement toward a same goal.

The next explanation will be about to integrate those principles into a series of instructions in teaching-leaning activities. As in the usual ways of teaching, there also be pre-, whilst, and post phases in the Brain-Based teaching activities. The first phase relates to what to do before the class begins and the preparation time. The second phase is concentrated on the learning process. Finally, the last phase helps ensure the learning has paced the best it can be and be memorable as long as possible. Jensen (2005: 146-149) have sequenced the whole information of BBL into a model of teaching with the brain in mind:



#### 1. Pre-exposure and preparation

Pre-exposure helps build better conceptual map in students' brain. This activity focuses on preparing the class "mentally, academically, and emotionally" to help either teachers or students, or both of them. The teachers are better come in the class in good emotional state. The students can detect this positive aura and it makes they experience better learning. Days and weeks ahead can be used optimally for repairing the students brains with the materials which they are going to learn. This step requires teachers to influence content areas in pictures or mind-map so that students can become familiar with them.

#### 2. Engagement

"This step is about engaging the mind and body" (Jensen, 2005: 147). It is the setup activity for learning in the first few minutes of the class to positively influence students' states.

#### 3. Framing

Framing means to "frame" students' emotional states. Jensen (2005: 147) illustrates this framing step as the frame of a picture that set up the background of an activity. Students who have been framed emotionally in a learning activity will less wander out of the frame; or when they do, teachers can draw them back inside the border through this framing step.

Teachers can use "a word, an activity, an assignment" (Jensen, 2005:147) as the framing. Nurhadyani (2012) in her undergraduate thesis research used sheets of learning target and evaluation, or which she used the term "Lembar Target dan Evaluasi", as the tools in framing step. The sheets contained table. She distributed the sheets to each of her students and had them to fill in. Therefore, anytime the students fell unmotivated, framing is always the best way to engage them mentally and emotionally.

Teachers can do this step by setting up the learning objectives for the day, week, or semester. Sheets of target and evaluation are distributed to the students to be filled in. Through this way, teachers can remind them on the purpose of their learning and motivate them to fulfill it.

#### 4. Acquisition

Jensen (2005: 147 – 148) defines this step as "the part of your instructional day that focuses on input". It is the step where connections between neurons are created and where neurons are "communicating" to each other.

#### 5. Elaboration

This step gives chance to the brain to sort, investigate, analyze, examine, and deepen learning through integration and error correction (Jensen, 2005: 148).

#### 6. Memory Strengthening

This step emphasizes that providing time for recalling what have been learned is an important thing. "At this point, students' knowledge should be accurate. Now is the time to take a few moments to ensure that the right content will be recalled" (Jensen, 2005: 148).

#### 7. Settling Time and Rest

This step is used to give students a way to let the knowledge settle. Taking time for breaks or scheming the learning just before the end of the class is included (Jensen, 2005: 148 – 149).

#### 8. Review and Revision

This is a follow-up step where some revision time should be incorporated into every meeting to not let the knowledge that has been settled to change (Jensen, 2005: 149).

A study needed to be conducted to describe the implementation of BBL to teach reading descriptive text could be described, as well as the students' reading ability after the implementation, and their responses towards the implementation.

As a result of this research, the writer intends to find a harmony in teaching English as a foreign language in Indonesia and the way pupils' brain works. When a



teacher knows how their pupils' brain work optimally and learn best, s/he must be eager to take advantage of this knowledge to help their pupils learn as quickly and efficiently as possible.

## METHODS

This study tried to picture the implementation of BBL to teach reading descriptive text to the tenth graders of SMA Khadijah Surabaya, how it impacts on their performance in class and how their responses towards it. The writer looked at this interaction in teaching-learning process as one complex phenomenon which carries deep meaning. Sugiyono (2008: 1) refers this view as post-positivism paradigm that led to the emergence of qualitative research method. Another belief from Postlethwaite (2005) also been the basic of the selection of this research design which says that "descriptive research provides information about conditions, situations, and events that occur in the present" (pg. 3). Hence, the writer was ensured that this study should be carried out by developing descriptive qualitative research methodology.

Sugiyono (2008: 50) explains that there is no such thing as population in qualitative research – Spadley (1980, in Sugiyono, 2008: 49) uses the term "social situation" instead. It consists of three elements, which are place, actors, and activity, which interact in synergy. As the object of the research, the activity done by the actors in that place are observed in-depth. The social situation was chosen due to the genre text taught in the grade. Based on the *Standar Isi* SMA/MA, narrative, descriptive, and news item text are expected to be comprehended in the tenth grade. The place targeted in this study was SMA Khadijah Surabaya, located on Jalan Jenderal Ahmad Yani no. 2 – 4, Wonokromo, Surabaya. It has six classes of tenth graders, from X-1 to X-6. Class X-4 was chosen out of the six with reasons. It consists of less numbers of students than the other classes, has the physical condition that was considered to be brain-compatible. The room gets more light than the others, feels homey with many its personal belongings stuffed in, is using scent, and is provided with a gallon of water for students to refill their bottles.

Because the main purpose of conducting a study is to collect data, the stage of data collection in research has to be strategic. Absent knowledge of the techniques, the data could not be gathered as expected to answer research problems. Techniques employed in this study to collect data were observation, test, and questionnaire.

The writer conducted observation in two meetings regarding the limited time the students have before final term examination, from Wednesday to Thursday, May 22-23, 2013. While observing, she utilized observation checklist as an instrument to examine the implementation

of BBL in the class, whether or not it brought in Erlauer's key factors and followed Jensen's teaching model. The observation checklist was divided into five sections, numbered from A to E, represented these categories: teacher's behavior, classroom environment, lesson topic and learning material, teaching and learning process, and students' behavior. Each indicator was observed and graded by its existence in the teaching-learning process. The indicator was graded "Yes" if the writer became aware of its application or its existence, and "No" if the writer noticed no application or existence of it. The writer then added further notes of it in the "Comment" column. As an addition, she captured some activities did during teaching-learning process in still photos and recorded few parts of conversations between teacher and students in field notes. The writer chose to be an "observer as participant", which means that she observed participants' activities with minimal interaction with them. This minimal interaction included brief informal contacts happened when she sat observing at the back of the room. She also did not to participate in the class' activities.

The writer observed reading comprehension of the students from the results of the informal product assessments done on Day 1 and 2. One of them was in the form of short-answer test items. It then was observed using the rubric adopted from *iRubric: Short Answer Test Assessment Rubric* (2012) to find out the value of their answers, whether their answers contained exceptional or satisfactory content, had met expectations, or still need improvement. In addition, the writer observed the result of students' mind map, considering mind map is a great tool "to gauge the knowledge they have absorbed". It allows them "to interpret and express idea metaphorically...and to display their contextual knowledge and requires deeper insight" (Mind Maps for Pre and Post Assessment, 2013). They were examined using rubric adapted from Bennett's *Beyond Monet* (2001) taken from <http://myclass.peelschools.org> to see how far their comprehension cover the information delivered in the text.

The respondents of the questionnaire were the thirty students in X-4. They had to answer the questions by choosing the most corresponding answer provided in the questionnaire. The questionnaire was divided into five sections: the first and second section had respondents to choose whether they like, are okay with, or do not like certain teaching-learning activity and learning material. The questions in section three asked them whether or not they encounter certain problem in reading. The last one made them to choose which activity and material in section one and two helped them much in reading and which problem been overcome. After that, the questionnaires were observed to see the students'

tendency in learning materials and activities, their major problem in reading, and which materials and activities assisted them best in overcoming it; as well as their comment on BBL implemented by the teacher and how it affected their learning.

Data analysis technique in qualitative research uses inductive reasoning. The writer organized the massive collection of data into several categories derived from the research problems, which are: the implementation of BBL to teach reading descriptive text; students' reading ability; and students' responses. Afterward, each category was explained further and thickly. Eventually, the writer discovered the red line which integrated the categories or the aspects in the phenomenon with the theory.

## RESULT AND DISCUSSION

This part presents the result of analysis and discussion of the observation in this study. The writer tries to answer the research questions, which are stated earlier in the Introduction.

### The Implementation of BBL in Teaching Reading Descriptive Text to the Tenth Graders

The writer analyzed the teaching-learning activity done to the students of X-4 in SMA Khadijah Surabaya with the teaching model explained by Jensen (2005: 145).

Table 1. Analysis of the observation Meeting 1

Time Allocated	Activities	The Jensen's Teaching Model	
2 min.	Settling the class	10% (12 min.) for 1) preparing learners, and 2) creating optimal environment.	
5 min.	Giving instructions for the game		
5 min.	Preparing the preliminary game		
15 min.	Preliminary game: describing things and people.	Engagement	80% (96 minutes) for engagement, framing, acquisition, elaboration, and memory strengthening.
5 min.	'Awarding' the group with the most points 'stars' and extra scores.		
20 min.	Brief explanation of descriptive text: prompt feedback on	Elaboration & Acquisition	

	students' deficiency in describing a subject earlier.		
15 min.	Preparing and giving instructions for the next activity.	Memory strengthening	
25 min.	Reading and answering comprehension questions.		
15 min.	Extra time for main activity.		
10 min.	Brief review of previous activities: confirm students' comprehension.	10% (12 min.) for settling time and rest, and review and revision.	
2 min.	Informing of tomorrow's activities.		

Preparation had been started days ahead. The class had been told that a guest they knew will come to visit and join them (the writer was once an internship teacher in SMA Khadijah Surabaya). Therefore, the teacher decided to carry out the lesson pleasurable. This kind of mental and emotional preparation brings excitement to students and makes them experience better learning. Daily preparation involved the teacher smiling as she entered classroom which brought positive aura to them. Students had enthusiasm, interest and effort toward learning when students detect the positive energy in teacher. Pre-exposure to content areas was not intense though. Instead of priming students' brain with specific upcoming content, plan for activities until mid-semester was shared. Therefore, they have prepared for the lesson topics and tasks they will deal with.

The teacher paid a great attention in the importance of engaging her students before the lesson starts. Hence, she always does a preliminary activity. This setup activity for learning can positively influence students' states. On this occasion, she set up a game which functioned as an introduction to the content of descriptive text.

The framing stage was not gone through daily but rather every beginning of a semester. The teacher shared series of activities she had planned for the half of the semester and had students to brainstorm any suggestion, change, or addition to the plan she had made. By that, the

class could set up their goals during the next half-semester.

A feedback was given as a stage of elaboration after the students performed their ability in describing things and person in the preliminary activity. Before the synapse is fixed, the teacher made sure that what they had learned was correct by promptly correcting error. She made use of this error correction to deliver her next stage that is acquisition. An explanation of how to describe a person was given.

Activities in the first meeting did not proceed smoothly as planned. Students had to spend time in the memory strengthening stage more than their brain could bear. There were a disproportionate number of questions to the given time. Therefore, the teacher was compelled to provide extra time for those who have not yet finished and that caused a little disorder. When the class was outdoors, they began wandering off. In that case, the teacher guided them back to class and let the group with unfinished job completed their task and the others could take their break time to settle the knowledge. She then closed the lesson of the day by reviewing how to describe a person.

Table 2. Analysis of the observation Meeting 2

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Time Allocated	Activities	The Jensen's Teaching Model	
2 min.	Settling the class	10% (12 min.) for 1) preparing learners, and 2) creating optimal environment.	
5 min.	Giving instructions for the game		
5 min.	Preparing the preliminary game		
10 min.	Preliminary game: "Pronunciation Journey".	Engagement	80% (96 minutes) for engagement, framing, acquisition, elaboration, and memory strengthening.
15 min.	Brief explanation of descriptive text.	Acquisition	
5 min.	Preparing the next activity.	Memory Strengthening	
5 min.	Giving instructions for the next activity.		
20 min.	Reading and answering comprehension questions.		
5 min.	Explaining	Acquisition	

	how to construct a mind-map	n	
15 min.	Drawing mind-map.	Memory Strengthening	
15 min.	Presenting the mind-map.		
5 min.	Detailing each mind-map with its strong point and flaw.	Elaboration	
5 min.	Brief review of previous activities.	10% (12 min.) for settling time and rest, and review and revision.	

In this second day of observation, the students had had quite enough exposure to the content of descriptive text from the previous meeting. In the other word, they had been prepared academically, mentally, and emotionally.

Differed from the preceding preliminary activity, the teacher simply activated students' focus on and attention to the lesson. With employing minimal pair as the subject matter, she had them focus on the task. She then awarded 'star' and extra score to those who were the fastest to reach the destination.

When the teacher was certain that they were in a good state to learn, she shifted the teaching instruction onto an acquisition stage. She delivered a lecture on how to find main as well as supporting ideas in descriptive text. Shortly afterward, she made the students recall what they had gotten earlier at the acquisition stage by having them to scan and skim a text and find either main or supporting ideas/details needed to answer the questions.

The teacher had the students to use once more their knowledge in order to make it lasts in their brain. A task to encapsulate a text in a mind-map was given with taking into consideration that that assignment required them to organize main/key ideas and supporting ideas/details into a diagram so that it is easier to understand. However earlier she provided short guidance in composing a mind-map.

Feedback on student-made mind-map was provided swiftly after they had presented their mind-map before class. The teacher pointed out the strength and weakness of each so that they could take their cue for either maintenance of or improvement in their works.

### **The Students' Reading Ability after the Implementation of BBL to Teach Reading Descriptive Text**

The implementation of BBL in teaching reading descriptive text to tenth graders in SMA Khadijah Surabaya brought positive outcome to them. From the result of short-answer test items, almost all the contents of the answers were exceptional: they were comprehensive, accurate, and complete. Key ideas were clearly stated, explained, and well supported. Almost all answers scored perfect 12 – with exceptional content, organization, and writing conventions. Otherwise, they lacked only of organization and writing conventions – with inadequate organization or development, structure which is not easy to follow, and three to five errors in spelling, punctuation, grammar, and sentence structure. A few students sometimes did not answer one or two questions though.

Concerning students' depth of content coverage, they were either at satisfactory or good level of coverage. Satisfactory level of coverage means a basic level of coverage of key ideas only and still attempt extension of a few ideas. Good level of coverage means a solid grasp of most of the content and extensions of most key ideas. Their comprehensions towards the texts were not excellent and were not poor. The same result occurred in their mind-map organization. Seven students have applied good mind-map organization – ideas clearly connect to central image and ideas and generally move from most to least complex – and a four-fifths majority of students organized mind-map satisfactorily; all ideas radiated out from the centre and but there were still some confusion in moving from most to least complex.

### **The Students' Responses towards the Implementation of BBL to Teach Reading Descriptive Text**

There were always a number of students who admitted to not like doing certain activities. The number varied from one to four, except for teacher's explanation, doing pair/group work and preliminary activity (e.g. short game). None of them unlike to perform those activities. From the result, it could be assumed that the whole students in the class were fond of or were OK paying attention to those three teaching instructions. Nevertheless, just the latter which they assumed have helped them much in reading. Other two former activities were thought to assist only less than a third of the class in reading. Most of students believed that learning grammar was the key to comprehend a descriptive text, followed by pair/group work as stated before, learning vocabulary and generic structure. The survey result was unexpected at first, but then the writer realized a fact: fundamental activities for reading, such as learning generic structure, grammatical features, and vocabulary were still the most

significant elements in students' learning. They realized it somehow; hence most of them chose those activities as the answers of which activity assists them in reading.

To my surprise, the brain-based material such as student-choice and authentic material held meaning to assist in reading descriptive text for the least students that is for only four students. Majority of answer was teacher's note on whiteboard, followed by worksheet and teacher-choice material. Although, greater part of the class admitted that BBL approach had helped them in overcoming some of their difficulties in comprehending descriptive text, mainly the problem in comprehending the text wholly.

### **CONCLUSION**

There are three points the writer could conclude by drawing on the research problems as the point of view. The first point is that the implementation of BBL to teach reading descriptive text to the tenth graders in SMA Khadijah Surabaya was conducted in these steps; as the pre-activity, teacher created an optimal environment for learning by settling the class and began giving instructions of the next activity for students to anticipate. In whilst-activity, she went through several stages: engagement, acquisition, memory strengthening, and elaboration. To begin with, a preliminary game was played to interest students in the lesson and to initiate their focuses on it. After their focuses engaged to the lessons, they entered the acquisition stage to acquire knowledge from teacher giving explanation of the lesson's content. The next phase was strengthening memory where their knowledge should be accurate. Afterward, they entered the elaboration stage to deepen learning through error correction and integration. This could be done by assessing them, either formally or informally. Teacher made prompt feedback when she found inaccurate knowledge revealed through the memory strengthening phase, considering the fact that mistakes are easier to correct earlier than later. By doing so, students know whether they have learned something correctly or not. Finally, the post-activity was settling time for review and revision.

The second point is that their reading comprehension after being taught reading descriptive text by implementing BBL was averagely good. From the result of short-answer test items, almost all the contents of the answers were exceptional: they were comprehensive, accurate, and complete. Key ideas were clearly stated, explained, and well supported. Almost all answers contained exceptional content, organization, and writing conventions. Otherwise, they lacked only of organization and writing conventions – with inadequate organization or development, structure which is not easy to follow, and three to five errors in spelling, punctuation, grammar,



and sentence structure. A few students sometimes did not answer one or two questions though. Concerning students' depth of content coverage, they were either at satisfactory or good level of coverage. Satisfactory level of coverage means a basic level of coverage of key ideas only and still attempt extension of a few ideas. Good level of coverage means a solid grasp of most of the content and extensions of most key ideas. Their comprehensions towards the texts were not excellent and were not poor. The same result occurred in their mind-map organization. Seven students have applied good mind-map organization – ideas clearly connect to central image and ideas and generally move from most to least complex – and a four-fifths majority of students organized mind-map satisfactorily; all ideas radiated out from the centre and but there were still some confusion in moving from most to least complex.

The third point is that their responses toward the implementation of BBL in teaching reading were good. Most of them considered BBL sufficiently assisting them in comprehending descriptive text. Although most of them admitted that not all of their complications in comprehending text were unraveled, some of them were. To the writer's surprise, brain-compatible activities such as changing location, doing pair/group work, and having a preliminary activity did not be the most successful problem-solving technique in comprehending a text. Basic and conventional activity like learning grammar was the activity they experienced helping them in comprehending a descriptive text. After all, it was the way teacher delivers the content areas that matters.

## SUGGESTIONS

Some practical suggestions the writer may suggest for those who are willing to bring BBL into their classrooms are:

- In teaching reading, learning grammar, generic structure, and vocabulary are essential and irreplaceable. Thus, the way teachers deliver them that should be brain-compatible.
- Students' physical condition is essential as well. Teachers should make sure that they are well fed, well hydrated, and well rested.
- Students' mental condition affects their performance in class. Teachers should make them feel safe emotionally and as the result they will likely to explore their abilities without fear of making mistakes.
- Enrichment in physical environment is essential in optimizing the brain's work. Therefore, teachers should not neglect the condition of classroom or other locations for learning.

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